

**AMENDMENTS TO THE SPECIFICATION:**

Please replace the paragraph beginning on page 2, line 7 and ending on page 2, line 8 with the following amended paragraph:

The object is achieved by a method and a sensor device according to the embodiments of the present invention independent Claims 1 and 4 respectively.

Please replace the paragraph beginning on page 2, line 10 and ending on page 2, line 22 with the following amended paragraph:

Claim 1 An embodiment relates to a method for measuring the degree of fibre concentration in a pulp inside a machine, in particular a refiner for the manufacture of paper pulp, which machine comprises a stator and an opposing rotor, which form a grinding gap for the pulp. The stator is provided with at least one sensor device, designed to interact with a rotor surface and comprising an impedance meter body with a sensor surface, which impedance meter body is mounted in the stator in such a way that it can move axially. The method is characterized in that measurements of the impedance between the rotor surface and the sensor surface are carried out during an axial movement of the impedance meter body and in that the measured impedance differences are utilized together with the size of the movement to determine the dielectric constant of the pulp, from which the degree of fibre concentration in the pulp is derived.

Please replace the paragraph beginning on page 2, line 36 and ending on page 3, line 9 with the following amended paragraph:

Claim 4 Another embodiment relates to a sensor device for measuring the degree of fibre concentration in a pulp inside a machine, in particular a refiner for the manufacture of paper pulp, which machine comprises a stator and an opposing rotor, which form a grinding gap for the pulp. The sensor device is designed to be mounted in the stator to interact with a rotor surface and comprises an impedance meter body with a sensor surface, which impedance meter body is movable in an axial direction and is connected to an operating mechanism for axial movement relative to the housing. The sensor device is characterized in that the impedance meter body is arranged to measure the impedance between the sensor surface and the rotor surface during axial movement thereof.